

STATIONARY SOURCE PERMIT TO OPERATE

This permit implements the requirements for Reasonably Available Control Technology (RACT) for nitrogen oxides (NO_x) in the Western Virginia Emissions Control Area and the NO_x reduction requirements for cement manufacturing mandated by Phase I of the NO_x SIP Call.

This permit is for the purposes of (i) implementing the “reasonably available control technology” (RACT) requirements of 9 VAC 5-40-7410 and 9 VAC 5-40-7430 of the Regulations of the Board; (ii) implementing the requirements of Phase I of the NO_x SIP Call for cement manufacturing codified in 40 CFR 51.121; and (iii) establishing control technology and other requirements for the control of NO_x from the Roanoke Cement Company’s portland cement manufacturing plant in the Western Virginia Emissions Control Area. These RACT and Phase I NO_x SIP Call requirements shall be the regulatory basis for control of NO_x emissions from this facility.

In compliance with the federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

Roanoke Cement Company
6071 Catawba Road
Troutville, VA 24175
Registration No.: 20232
County Plant No.: 51-023-0003

is authorized to operate

a Portland Cement Manufacturing Plant
located at 6071 Catawba Road, Troutville, VA

in accordance with the Conditions of this permit.

Approved on **DRAFT.**

David K. Paylor
Director, Department of Environmental Quality

Permit consists of 5 pages.
Permit Conditions 1 to 16 .

PERMIT CONDITIONS - the regulatory reference or authority for each condition is listed in parentheses () after each condition.

PROCESS REQUIREMENTS

1. **Equipment List** – The following equipment is subject to the requirements of 9 VAC 5-40-7410 for the Western Virginia Emissions Control Area and the requirements of 40 CFR 51.121. A demonstration of Reasonably Available Control Technology (RACT) for NO_x is required for each of these units:

- the No. 5 Precalciner Kiln rated at 550 MMBtu/hr

A demonstration of RACT is not required for the following units:

- Superior Boiler (NG fired) rated at 5.23 MMBtu/hr
- Diesel Emergency generator for kiln drive rated at 300 HP
- Diesel Emergency process water pump rated at 300 HP
- Diesel water pump (portable) rated at 60 HP
- Steam jenny propane engine rated at 6 HP

(9 VAC 5-40-7410, 9 VAC 5-40-7430 C3 and 9 VAC 5-80-850)

2. **Emission Controls** – After the first scheduled plant shutdown which occurs after November 15, 2005, but no later than June 1, 2006, NO_x emissions from the No. 5 Kiln shall be controlled by indirect firing with Low NO_x burner. The Low NO_x burner shall be designed to reduce NO_x generation from the kiln burner by 10%. This reduction will only be reflected in gases that bypass the precalciner.
(9 VAC 5-80-850)
3. **Emission Controls** – Prior to the first scheduled plant shutdown which occurs after November 15, 2005, NO_x emissions from the No. 5 Kiln shall be controlled by indirect firing.
(9 VAC 5-80-850, 9 VAC 5-50-260 and 9 VAC 5-80-1180)
4. **Emission Controls** – NO_x emissions from the No. 5 Kiln/ Pre-Heater/ Pre-Calciner shall be controlled by process control and good combustion practices.
(9 VAC 5-80-850, 9 VAC 5-50-260 and 9 VAC 5-80-1180)
5. **Emission Limits** - NO_x emissions from the No. 5 Kiln/ Pre-Heater/ Pre-Calciner main stack shall not exceed the limits as specified below:
 - a. Prior to the first scheduled plant shutdown which occurs after November 15, 2005, NO_x emissions shall not exceed 982 lb/hr

b. After the first scheduled plant shutdown which occurs after November 15, 2005, but no later than June 1, 2006, NO_x emissions shall not exceed 962 lb/hour
(9 VAC 5-80-850)

6. **Initial Notifications** - The permittee shall furnish written notification to the West Central Regional Office:

- a. The actual date on which installation of the Low NO_x burner commenced within 15 days after such date.
- b. The anticipated start-up date of the new kiln burner, postmarked not more than 60 days nor less than 10 days prior to such date.
- c. The actual start-up date of the new kiln burner within 15 days after such date.
(9 VAC 5-80-850)

RECORDS

7. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the West Central Regional Office. These records shall include, but are not limited to:

- a. Annual throughput of the following, calculated monthly as the sum of each consecutive twelve (12) month period.
 - i. No. 5 Kiln feed material throughput, including recycle dust,
 - ii. No. 5 Kiln/Clinker Cooler clinker produced.
- b. The annual consumption of coal, and petroleum coke by the No. 5 kiln system, calculated monthly as the sum of each consecutive twelve (12) month period.
- c. The annual overall consumption of No. 2 fuel oil and natural gas by the plant, calculated monthly as the sum of each consecutive twelve (12) month period.
- d. NO_x continuous emission monitor data/records.
- e. The annual emissions of NO_x for the No. 5 kiln system (main stack), calculated monthly as the sum of each consecutive twelve (12) month period.
- f. Notifications required by this permit.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.
(9 VAC 5-50-50 and 9 VAC 5-80-900)

8. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. Test ports shall be provided when requested at the appropriate locations and in accordance with the applicable performance specification (reference 40 CFR Part 60, Appendix B).
(9 VAC 5-80-880)
9. **Continuous Emission Monitor** - A continuous emission monitor shall be maintained (already installed) to measure and record the emissions of nitrogen oxides from the No. 5 kiln system/raw mills/alkali bypass system (main stack). The monitor shall be co-located on the main stack with a flow monitor (cfm). The monitors shall be maintained, located, and calibrated in accordance with approved procedures (ref. 40 CFR 60.13).
(9 VAC 5-50-40 F, 9 VAC 5-80-1180 and 9 VAC 5-80-890)

GENERAL CONDITIONS

10. **Relationship To Other Requirements** - Except to the extent that conditions in this permit may be more stringent, this permit does not supersede or replace any other valid permit, regulatory or statutory requirement. Furthermore, this approval to operate shall not relieve the Roanoke Cement Company of the responsibility to comply with all other local, state and federal regulations, including permit regulations.
(9 VAC 5-80-800 D and 9 VAC 5-80-820 F)
11. **Federal Enforceability** - Once the permit is approved by the U.S. Environmental Protection Agency into the Commonwealth of Virginia State Implementation Plan, the permit is enforceable by EPA and citizens under the federal Clean Air Act.
(9 VAC 5-80-800 C2 and 9 VAC 5-80-820 F)
12. **Permit Modification** - The Board may revise (modify, rewrite, change or amend) or repeal this permit with the consent of Roanoke Cement Company, for good cause shown by Roanoke Cement Company, or on its own motion provided approval of the revision or repeal is accomplished in accordance with Regulations of the Board and the Administrative Process Act (§ 2.2-4000 et seq.). Such revision or repeal shall not be effective until the revision or repeal is approved by the U. S. Environmental Protection Agency following the requirements of 40 CFR Part 51 (Requirements for Preparation, Adoption, and Submittal of Implementation Plans).
(9 VAC 5-80-960 and 9 VAC 5-80-1000)
13. **Failure To Comply** - Failure by the Roanoke Cement Company to comply with any of the conditions of this permit shall constitute a violation of a Permit of the Board. Failure to comply may result in a Notice of Violation and civil penalty. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of orders as appropriate by the Board as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.
(9 VAC 5-80-820 F, 9 VAC 5-80-910 and 9 VAC 5-80-1010)

14. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:
- To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
 - To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
 - To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
 - To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.

(9 VAC 5-170-130 and 9 VAC 5-80-850)

15. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the West Central Regional Office of the change of ownership within 30 days of the transfer.

(9 VAC 5-80-940)

16. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.

(9 VAC 5-80-860 D)